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ABSTRACT

This document comprises the first volume of a three-volume study, mandated by the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, on domestic and foreign tutoring programs for disadvantaged elementary and secondary students that involve college students. This volume summarizes the results of the mandated study, which was expanded to include mentoring programs. The programs had the following positive effects on disadvantaged students: (1) improved test scores, grades, and overall academic performance; (2) improved motivation and attitude towards education; (3) increased familiarity with environments other than their own; and (4) improved self-esteem and self-confidence. The programs had the following positive effects on college students: (1) they obtained practical experience and improved leadership and communication skills; (2) developed a greater commitment to community service; and (3) increased their self-esteem and self-confidence. Positive effects were associated with programs with the following structures: (1) defined time commitments from tutors and mentors; (2) systematic screening of prospective tutors and mentors and matching with younger students; (3) thorough training and monitoring of tutors and mentors; and (4) close relations between the sponsoring colleges and participating school systems. The following federal programs could provide assistance to tutoring and mentoring programs: (1) Chapter 1 and 2 of the Elementary and Secondary Education Act; (2) the Fund for the Improvement of Postsecondary Education; and (3) the College Work Study Program. Statistical data are included on 16 tables. A list of 15 references is appended. (FMW)

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A REVIEW OF PROGRAMS INVOLVING COLLEGE STUDENTS AS TUTORS OR MENTORS IN GRADES K-12

Volume I

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November 1989

Prepared for the U.S. Department of Education
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EXECUTIVE SUMMARY

Reflecting a growing national interest in volunteer youth services, the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 require the secretary of education to study and report on tutoring programs for disadvantaged elementary and secondary students that involve college students as tutors. The mandate also includes a requirement to review tutoring programs conducted in foreign countries to determine their relevance to the United States. This report summarizes the results of the mandated study, whose scope was expanded slightly to include mentoring programs in which college students serve as role models and informal advisors to younger students. To help determine the longer-term opportunities offered by tutoring and mentoring projects, the study examined existing data on program effectiveness.

Evidence Regarding the Effectiveness of Tutoring and Mentoring Programs

The sponsoring projects generally report that tutoring and mentoring services have positive effects on (1) the test scores, grades, and overall academic performance of disadvantaged elementary and secondary students; (2) their motivation and attitude toward education; (3) their familiarity with environments other than their own; and (4) their self-esteem and self-confidence. They also report that project participation helps college students (1) obtain practical experience and improve their leadership and communication skills, (2) develop a greater commitment to community service, and (3) increase their self-esteem and self-confidence. Although the strength

of these findings is weakened by the fact that they are based primarily on self-evaluations, other research on tutoring and mentoring services to disadvantaged students confirms the capacity of such programs to produce beneficial results (Cohen, Kulik, & Kulik, 1982; Flaxman, Ascher, & Harrington, 1988; Slavin, 1987).

Our review of the research literature and interviews conducted for this study suggest that positive effects are most strongly associated with programs that exhibit a fairly high degree of structure. These programs tend to include the following:

- Defined time commitments from tutors and mentors

  Time commitments are sufficient in session length and overall duration to provide consistent, regular contact with participating youth. Campus Compact, a national organization that promotes and sponsors youth service, recommends that college tutors and mentors commit three hours each week over a year's time.

- Systematic screening of prospective tutors and mentors and matching with younger students

  The experience of current programs indicates that prospective tutors and mentors are most likely to succeed in their relationships with younger students if they place a high value on the service they will be providing and they are proficient in the skills that they intend to teach. College students are most likely to form productive tutoring and mentoring relationships with younger students when the pairing of older and younger students takes account of shared traits and interests.

- Thorough training and monitoring of tutors and mentors

  These activities typically focus on (1) the continuing development of effective relationships between tutors or mentors and students and (2) the content of the skills and knowledge that the tutors and mentors share with younger students. In interviews, most school personnel expressed a desire to play a greater role in training tutors and mentors.

- Close relations between the sponsoring colleges and participating school systems

  Because of the importance of personal relationships and trust in tutoring and mentoring activities, local project administrators

stress the importance of regular communication and high levels of cooperation among tutors and mentors, classroom teachers, parents, program coordinators, and school principals and other district administrators.

In general, the longer that tutoring and mentoring programs are in operation, the more likely they are to adopt the features described above. Programs with each of these features include the following:

- Berea College (Berea, Kentucky)

  Berea sponsors programs that provide both tutoring and mentoring services to a total of 160 disadvantaged youth who are at risk of dropping out of school. Tutoring activities are highly structured and emphasize improvement in reading skills and assistance with homework. Mentoring activities focus on the development of communication skills--orally, in writing, and through artistic media. About fifty Berea students are involved in the program, some serving in paid positions and others as volunteers, depending on their time commitment and level of responsibility. Participating youth report that their attitudes toward education and their self-confidence improved as a result of their involvement with the Berea programs. (See Appendix A.)

- Catholic University (Washington, D.C.)

  Catholic University's School of Social Service (working with the District of Columbia Department of Human Services and the Marriott Corporation) sponsors a tutoring and mentoring program that serves disadvantaged youth living in foster homes. The program is designed to help participants stay in school and to prepare for postsecondary education and employment. College tutors meet with their students twice a week--on Saturday for a tutorial session and one other day to participate in a recreational or cultural activity (e.g., movie, concert, trip to a museum, a beach, or the university gym). Marriott provides employment training and counseling for participants and a part-time job to each participant aged sixteen or older who is attending school. The program serves sixty youth and involves forty to forty-five college students, who receive a yearly stipend of $1,000. The most clear-cut effect on tutored students has been improved self-esteem. (See Appendix A.)

- City University of New York (CUNY) Student Mentor Program

  CUNY's program is exceptionally large, involving 226 college mentors and an equal number of high school students from disadvantaged backgrounds. In response to concerns about structure, the program has recently adopted a career-oriented curriculum, which aims to help participants develop ambitious, realistic personal goals and to learn how to make responsible decisions. Mentors meet with their

assigned students once a week for two hours. Students also meet weekly with the mentoring coordinators of their respective high schools; these group meetings are intended to reinforce students' experiences with their mentors. All mentors receive course credit for their efforts. Outside evaluations have found that participants tend to make "normal progress" toward high school graduation and that the "program brings people who want to help together with those who need it." (See Appendix B.)

Our examination of tutoring and mentoring programs in foreign countries found several instances of programs that are similar to the U.S. programs reviewed in this study. (See Appendices C and D.) The largest, most highly structured programs are in Israel and England.

- The Perach tutorial program operates in all seven of Israel's major universities. The program provides partial tuition reimbursements to university students who serve as tutors and mentors to disadvantaged children. Assessments of the tutored students' academic performance and personal development following tutoring indicate mixed results, with some increase in students' self-reports of their personal aspirations and success in academic subjects.

- Our review also revealed several tutoring and mentoring programs in English universities. These programs tend to focus either on tutoring in math and science or on meeting the special needs of immigrant children. Evaluation of these programs has consisted mainly of self-reports showing participants' and teachers' satisfaction with program services.

The non-U.S. program with the greatest relevance to this study is a small project in Canada that was evaluated twelve years ago (Schwartz, 1977). The program used college students as tutors in a remedial reading project that emphasized reading for pleasure and employed behavioral modification techniques. Tutors were provided with extensive training before they began working with students. Comparisons of participants and control students demonstrated significant gains in reading resulting from the program.

The Scope and Characteristics of Current Programs

According to a nationally representative survey of colleges and universities conducted for the mandated study, about 1,700 tutoring and mentoring programs are currently operating in 921 of the nation's 3,200 colleges and universities (Westat, 1989).

- Most of these programs designate tutoring as their primary focus.
- The higher education institutions themselves are most often the main funders of these programs, which are typically directed by a faculty member or college administrator.
- Over half of the programs are relatively new, having begun operations since 1980.
- Sponsoring colleges and universities report that the local demand for tutoring and mentoring services outstrips the supply of services.

In the 1987-88 school year, programs that had tutoring or mentoring as their primary focus served 198,300 students and involved 63,200 college tutors and mentors.

- Most of the elementary and secondary students served were minority group members from socioeconomically and academically disadvantaged backgrounds.
- An equal number of girls and boys were served.
- Tutors and mentors tended to be young women who were not socio-economically disadvantaged and were not members of racial or ethnic minority groups.
- The survey data indicate that tutors and mentors are most likely to serve in a purely voluntary capacity, although some receive payment or a stipend and others provide services to fulfill a course or graduation requirement.

Principles for Expanding Support to Tutoring and Mentoring Programs

Although there is no federal program that targets assistance to tutoring and mentoring programs, four current programs either provide or could provide

such assistance; these are Chapter 1 and Chapter 2 of the Elementary and Secondary Education Act, the Fund for the Improvement of Postsecondary Education, and the College Work Study program. Our analysis of these programs--in light of current local efforts to provide tutoring and mentoring services--suggests the following four principles that might form the basis for a strategy of promoting and encouraging the delivery of these services:

1. Any targeted assistance will be most effective if it builds on current tutoring and mentoring programs.

   Local initiative--with some outside encouragement--has led to the establishment of many tutoring and mentoring projects in recent years. This level of activity suggests that considerable local interest and enthusiasm currently exist to support these services. In this environment, the federal government may be most effective by providing supplementary help rather than taking the lead.

2. Federal financial support may be most useful in assisting project development and implementation at the college level, rather than in school systems.

   Although school systems are central partners in these projects, colleges and universities provide the major support and leadership for the initiation and continuation of organized programs of tutoring and mentoring services. Institutions of higher education report needs for funds to cover administrative costs (especially training, monitoring, and liaison with school systems), student stipends, and transportation.

3. In order for school systems to become more active proponents of tutoring and mentoring arrangements with institutions of higher education, they need information and technical assistance that is not currently available to them.

   School systems need information on how they can integrate tutoring and mentoring into their instructional programs. These needs can be met through technical assistance in the form of printed information, training workshops, and conference presentations.

4. Existing organizations can be enlisted to assist higher education institutions in initiating, expanding, and improving tutoring and mentoring projects.

   Several organizations currently assist colleges and universities in developing and implementing community service activities, including tutoring and mentoring. Small infusions of supplementary support could translate directly into services for interested higher

education institutions, with little need for new organizational structures.

Because of the student support for projects that rely on volunteer tutors and mentors, we cannot conclude that financial incentives are essential for the expansion of tutoring and mentoring programs. Many students do not have the financial freedom, however, to choose voluntary service over paid employment during their college years. In order to extend service opportunities to college students who are themselves from disadvantaged backgrounds, it will be important to help colleges obtain resources for financial stipends or payments to tutors and mentors.

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I. INTRODUCTION

This report reviews the scope, characteristics, and effects of tutoring and mentoring services provided by college students to disadvantaged elementary and secondary students. It also examines options for increasing the availability of these services.

Tutoring and mentoring programs are highly relevant to national, state, and local efforts to address three current priorities in education. The first of these priorities is upgrading the education of disadvantaged students, especially as that improvement can be demonstrated through increased achievement and lowered drop-out rates. The second priority is finding instructional techniques that can be implemented in conjunction with local educational-reform objectives. The third priority is expanding opportunities for volunteer service by college-age youth.

These priorities are reflected in the legislative mandate for this study, which is included in the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 (P.L. 100-297). The provision (Section 6204) states:

> The secretary shall conduct a study of tutoring programs for eligible participants under chapter 1 of the Elementary and Secondary Act of 1965 carried out by students in institutions of higher education. In conducting such research, the secretary shall (1) determine if such programs are effective, (2) determine the role the federal government should play in promoting and encouraging such programs, (3) determine if such programs are effective if conducted on a volunteer basis or whether it is necessary to offer incentives, such as tuition assistance, academic credit, or reduced obligations for student loans, to induce participation by students in institutions of higher education, and (4) review available evidence on programs being conducted in foreign countries with a view toward determining whether their experience is applicable to the United States. The secretary shall report the results of the study to the Congress within 1 year of the date of the enactment of this Act.

Study Methods

The U.S. Department of Education (ED) conducted the mandated study in three phases. In the first phase, the department instructed Policy Studies Associates, Inc., (under ED contract 300-86-0094) to prepare four papers addressing topics in the legislative provisions. The papers, which are presented in Volume II of this report, are:

- Overview of U.S. Tutorial Programs That Pair College Students and Children (Appendix A)
- An Assessment of the CUNY [City University of New York] Student Mentor Program (Appendix B)
- Overview of Tutorial Programs in Western Europe and Canada That Pair College Students and Children (Appendix C)
- A Review of Israel's Perach Tutorial Program (Appendix D)

The CUNY and Perach programs received special attention in this series because they have been in place for several years and have been extensively reviewed and evaluated.

The second phase of the study was the design and administration of a survey of a nationally representative sample of colleges and universities to determine what proportion are implementing tutoring and mentoring programs and the characteristics of the tutoring and mentoring programs that they sponsor. Westat, Inc., conducted this survey in January 1989 and analyzed the resulting data under a contract with the National Science Foundation (SRS-8520082).

The third phase of the study was the synthesis and analysis of information obtained in the first two phases. Policy Studies Associates, Inc., carried out these activities (under ED contract LC89089001) and interviewed personnel of local tutoring and mentoring programs, school system personnel, ED program managers, and officials of national organizations

involved in promoting voluntary youth services; the names and affiliations of interviewees are listed in Appendix A. The report draws information from all three phases of the study.

In interpreting the legislative mandate, the study team made several decisions that affected the three phases of the study. First, we interpreted "eligible participants under Chapter 1 of the Elementary and Secondary Act of 1965" to mean disadvantaged children as identified locally. Since none of the tutoring and mentoring programs we examined in depth (see Appendix A) used Chapter 1 eligibility as a specific criterion for student participation, we adopted the criteria for determining student disadvantagement that the local projects used. These criteria included (1) low academic achievement, (2) low family income, (3) poor performance in school (which sometimes included factors other than academic achievement, such as poor attendance, poor classroom behavior, and failure to complete assignments), and (4) residence in blighted or economically depressed neighborhoods. These criteria are consistent with Chapter 1 eligibility requirements, and the broader definition permitted us to cast the widest possible net in identifying programs that exhibit the purposes and methods described in the mandate.

Second, we examined programs in which college students act as mentors (i.e., role models and informal advisors) as well as those in which they serve mainly as tutors. As discussed later in this report, many local programs involve both types of services. In some cases, programs providing one-on-one academic help to disadvantaged students have evolved in directions that emphasize development of self-esteem and skills in personal decision making. Because tutoring and mentoring services are so closely linked in many projects, this study has examined both types of services.

Profile of College Tutoring and Mentoring Programs

The survey conducted as part of this overall study (Westat, 1989) defined tutoring and mentoring programs to include "college-sponsored programs that involve undergraduate or graduate college students working with preschool, elementary, or secondary students to help the younger students improve their academic skills and motivate them to continue their education." Mentoring programs were defined as those providing successful role models and improving self-esteem and, unlike tutoring programs, not necessarily having a direct academic focus. The survey emphasized an interest in those tutoring or mentoring programs that target "economically disadvantaged schools or children."

Institutional Characteristics

According to the survey data, 29 percent of the 3,212 colleges and universities in the United States sponsor a total of 1,700 programs that include either tutoring or mentoring or both components. Of these programs, 1,130 (67 percent) report a primary service focus of tutoring, while another 281 (17 percent) report mentoring as their primary focus. The remaining 16 percent of the programs, while including tutoring and/or mentoring components, identify their primary service focus as diagnostic evaluation (fifty programs) or "other" (216 programs). Table 1 provides an overview of each of these program types by several institutional characteristics. For the remainder of this report, our analysis (including all of the tables) addresses the 84 percent of programs whose primary service focus is tutoring or mentoring.

Colleges and universities are almost four times more likely to sponsor tutoring than mentoring programs. Four-year institutions house the overwhelming majority of both tutoring and mentoring programs (89 and 82

Table 1

Percent Distribution of Programs, by Primary Service Focus and Institution Control, Type, Size, and Region

Institution characteristic	INSTITUTIONS			PRIMARY SERVICE FOCUS[a]				ENROLLMENT TOTAL[b]
	All (n=3,212) percent	With programs (n=921) percent	Without programs (n=2,291) percent	Tutoring (n=1,130) percent	Mentoring (n=281) percent	Diagnostic evaluation (n=50) percent	Other (n=216) percent	(n=12,247,055)
Institution control								
Private	55	59	53	65	53	29	36	23 percent
Public	45	41	47	35	47	71	64	77 percent
Institution type								
Four-year	60	84	50	89	82	100	73	63 percent
Two-year	40	15	50	11	18	0	27	37 percent
Institution enrollment								
Less than 1,500	51	38	56	40	17	12	17	..c
1,500 - 5,999	30	31	30	23	29	53	32	..
6,000 or more	19	32	14	37	54	36	51	..
Institution geographic region								
Northeast	28	29	27	28	41	34	29	24 percent
Central	28	23	30	22	15	13	11	26 percent
Southeast	22	19	23	20	25	27	18	19 percent
West	23	29	20	30	20	25	41	31 percent

a Weighted n's for programs do not add to 1,700, due to twenty-four missing cases where a primary service focus was not indicated.
b Fall 1985 total enrollment data, Digest of Education Statistics 1988.
c Enrollment data using these size cuts are not available.

percent, respectively). Two-year institutions house slightly more mentoring than tutoring programs (18 and 11 percent). While mentoring programs occur almost equally in private and public institutions (53 and 47 percent), tutoring programs are found nearly twice as often in private, rather than public, institutions (65 percent and 35 percent).

Primary service focus accounts for some program differences involving institution enrollment and geographic region. More than half (54 percent) of the mentoring programs are administered in large institutions (enrollment of 6,000 or more) of higher education (IHEs), a third (29 percent) in medium-sized institutions, and about one-sixth (17 percent) in small institutions. In contrast, nearly half of all tutoring programs (40 percent) are administered in small institutions, less than a fourth in medium-sized IHEs (23 percent), and more than one-third in large universities (37 percent). As might be expected, although only 19 percent of IHEs are classified as large, they are disproportionately represented among institutions with tutoring and mentoring programs. Tutoring programs are rather evenly spread across geographic regions, while mentoring programs are concentrated in the Northeast (41 percent of all such programs).

Inception of Current Projects

Table 2 reveals that, while almost half of the tutoring programs began before 1980, most mentoring programs were established during the last four years. One explanation for this, suggested by Lisa Hicks of Campus Compact, is that the term "mentoring" has become popular in recent years, even though the service has been provided for some time. Thus, the term may be new, but the programs or activities are not.

Table 2

Percent Distribution of Year That
Tutoring and Mentoring Programs Began Operating

Time period	Tutoring percent	Mentoring percent
Before 1980	47	27
1980-84	16	16
1985-87	23	32
After 1987	14	25
	100	100

The primary sponsors of current tutoring and mentoring programs are college departments and divisions. They sponsor 52 percent of tutoring programs and 36 percent of mentoring programs.

Program Size

Table 3 summarizes programs in terms of the number of tutors or mentors providing services in a typical week during the fall of 1988. Small, medium, and large tutoring programs are almost evenly distributed, while mentoring programs are slightly more likely to be medium- or large-sized.[1]

[1] Program size classifications were determined after reviewing the data provided by survey respondents.

Table 3

Percent Distribution of Tutoring and Mentoring Projects, by Program Size

Program size	Tutoring	Mentoring
	percent	percent
Small (eight or fewer students)	32	26
Medium (nine to twenty-one students)	36	30
Large (twenty-two or more students)	32	44
	---	---
	100	100

Program Goals

As might be expected, the primary goal for students receiving services from a tutor or mentor varies greatly by program orientation (Table 4). Over three-quarters of tutoring programs aim primarily to improve the basic skills of the elementary/secondary school students they serve, compared to 9 percent of mentoring programs. More than half of the mentoring programs are geared mainly toward either providing their participants with a role model or improving their self-esteem. Beyond that, the primary aim of mentoring programs is rather evenly distributed among the goals of improving basic skills, preventing students from dropping out of school, and providing exposure to college.

Table 4

Primary Program Goal for Students Being Tutored or Mentored, by Type of Primary Service Provided

Primary student goal	Tutoring percent	Mentoring percent
Improve basic skills	77	9
Improve self-esteem	9	23
Prevent dropouts	4	9
Expose participants to college	4	8
Provide role models	3	34
Assist gifted/talented	1	2
Improve vocational skills	0	5
Provide recreational/cultural activities	0	2
Other	2	7
	100	100

Tutoring and mentoring programs report different goals for their college tutors and mentors (Table 5). Well over half of the tutoring programs (57 percent) said that their primary goal for tutors is to permit them to obtain practical experience. While this primary goal is espoused by 35 percent of the mentoring programs, a larger set (40 percent) report public service as their primary goal for mentors.

Table 5

Primary Goal for Tutors and Mentors, by Type of Primary Service Provided

Primary tutor/mentor goal	Tutoring percent	Mentoring percent
Provide practical experience	57	35
Develop public service commitment	29	40
Provide non-campus experience	5	7
Other	9	17
	100	100

Participating Students

During the 1987-88 school year, about 161,000 preschool through secondary students were tutored in programs that identified themselves as focusing primarily on tutoring and that were affiliated with an IHE, and about 37,300 received mentoring services in such programs.[2] During a typical week, approximately 109,800 students were served by these programs. Tutoring programs served a median of sixty students per program, and mentoring programs served a median of forty-five students per program.[3]

[2] According to the Digest of Education Statistics 1988, the national enrollment in elementary and secondary education was 45.4 million students in 1986. For purposes of comparison, Chapter 1 currently serves about 4.7 million students.

[3] Medians, rather than means, are used for this and certain other measures because they provide a more accurate, less skewed statistic when comparing across programs.

The demand for tutors and mentors is greater than the supply. Thirty-six percent of tutoring programs and 32 percent of mentoring programs report more student referrals than can be served with available tutors and mentors. Medians of twenty students per tutoring program and thirty students per mentoring program cannot be served.

Nearly half (46 percent) of the students participating in tutoring programs are enrolled in elementary schools, while 40 percent of the mentoring participants are middle/junior high students (Table 6). Twenty-seven percent of tutoring participants are in senior high school, as are 23 percent of mentored students. Only a few tutoring and mentoring participants are in preschool or are school dropouts.

Table 6

School Level of Students Tutored or Mentored, by Type of Primary Service Provided

School level	Tutoring percent	Mentoring percent
Preschool	5	6
Elementary	46	31
Middle/junior high	20	40
Senior high	27	23
Dropouts	1	1

Table 7 summarizes selected demographic characteristics of students who are tutored or mentored. Both tutoring and mentoring programs tend to serve

high percentages of minorities and students from socioeconomically disadvantaged backgrounds, while tutoring programs tend to serve a somewhat greater percentage of academically disadvantaged students (70 percent) than do mentoring programs (50 percent). Programs tend to serve equal numbers of boys and girls.

Table 7

Characteristics of Students Served in Tutoring or Mentoring Programs, by Primary Service Focus

Student characteristic	Tutoring Median percent	Mentoring Median percent
Member of racial/ethnic minority group	70	70
Socioeconomically disadvantaged	66	70
Academically disadvantaged	70	50
Male	50	50

Tutors and Mentors

During the 1987-88 school year, about 52,400 college students served as tutors and about 10,800 served as mentors in programs with a primary focus of either tutoring or mentoring, with a median of twenty college students per tutor program and twenty-six college students per mentor program. In a typical week, about 33,500 tutors and 8,200 mentors provided services (at

least one tutoring or mentoring session each) to elementary and secondary school students.[4]

Survey respondents were asked to indicate who is eligible to participate in their programs. Twenty-one percent of tutor programs and 30 percent of mentor programs permit all college students in their communities to serve in their programs. Forty-two percent of tutor and mentor programs only allow students from their own college or university to participate. The remaining programs allow only students from a particular division or department at the institution to participate.

Although girls and boys are equally likely to receive tutor or mentor services, three-quarters of tutors and mentors are young women. Tutors are much less likely than the students they serve to be members of a racial/ethnic minority (11 percent median, compared across programs)[5] or to come from socioeconomically disadvantaged backgrounds (10 percent median). Among mentors, a median of 20 percent are minorities, and 20 percent come from socioeconomically disadvantaged backgrounds.

Reasons That College Students Participate in Programs

Survey respondents (typically a program staff member from each IHE) were also asked to indicate the most frequent reason that college students

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[4] According to the Digest of Education Statistics 1988, the full-time enrollment in higher education is 7.1 million.

[5] According to the Digest of Education Statistics 1988, the racial/ethnic enrollment in higher education (as of Fall 1986) was 79 percent white, 9 percent black, 5 percent Hispanic, 4 percent Asian/Pacific Islander, 3 percent non-resident aliens, and 1 percent Native American.

participate in their tutor or mentor program.[6] Table 8 indicates that two-thirds of the mentors (67 percent) participate on a voluntary basis. Far fewer participate for payment (14 percent) or as part of a course requirement (16 percent). The main reasons cited for tutor participation are more evenly distributed. Only a few tutors and mentors participate to fulfill a graduation requirement. However, these numbers indicate that community service has become a requirement for graduation at a few institutions.

Table 8

Most Frequent Reason Tutors or Mentors Participate in Programs, by Type of Primary Service Provided[7]

Reason given	Tutoring percent	Mentoring percent
Volunteer	35	67
Payment	29	14
Course requirement	32	16
Graduation requirement	3	2

Program Staff

Most tutoring and mentoring programs (88 percent and 85 percent, respectively) employ a program director. Fifty-nine percent of the programs also include at least one assistant coordinator. Most program directors are full-time employees of the institution who staff their programs on a full- or

[6] One must use caution in interpreting these data because the responses come from IHE staff and not from the tutors or mentors themselves.

[7] Columns do not add to 100 due to rounding.

part-time basis. About half of the assistant coordinators are part-time employees.

As one would expect, program size has an influence on the number of assistant coordinators per program. Small programs average one assistant coordinator, medium-sized programs average two, and large programs typically have three.

Most program directors (for all program sizes) are either faculty members or administrators. Assistant coordinators tend to be either faculty members, graduate students, or undergraduates.

General university salaries pay for over half of all program directors. Most assistant coordinators are paid from a general university salary or a university salary specifically designated for tutoring.

A fifth of the program directors for medium-sized and large programs and also assistant coordinators for large programs receive no compensation. Fewer small programs do not pay their program director (15 percent) or their assistant coordinator (11 percent).

Over half of all staff for all sizes of programs are responsible, to some degree, for the following: training, advising, monitoring, and recruiting tutors or mentors; working with classroom teachers and school district personnel; matching tutors or mentors with students; and working with parents or a parent-teacher association.

Funding Sources

Tutoring and mentoring programs receive funding from a variety of sources. However, the institutions that house these programs are also their primary funders 44 percent of the time. IHEs are the primary funder of all programs, especially large ones (Table 9). The federal government more often

supports small programs than medium or large programs. Tutoring programs (18 percent) more often obtain federal money as primary funding than do mentoring programs (8 percent). Both program types are equally likely (11 percent) to receive their primary resources from the state government.

Table 9

Primary Funding Source for Tutor and Mentor Programs, by Program Size

Source	Total	Program Size: Small	Medium	Large
	percent	percent	percent	percent
Institution of higher ed.	40	32	43	48
Federal government	18	27	14	12
State government	13	14	17	8
Private foundations	7	8	5	6
Individuals	6	10	5	4
School systems	2	1	1	3
Student fundraising	2	1	1	3
Local government	1	1	1	1
Businesses	1	0	1	1
Other	10	5	13	14
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	100	100	100	100

Other primary financial contributors include individuals, private foundations, school systems, businesses, and program participants (through

fundraising efforts). Local governments support less than half a percent of tutoring programs and 4 percent of mentoring programs.

Information on program budgets is limited because only 52 percent of survey respondents indicated that their program has a separate budget. Of those, more tutoring programs (58 percent) than mentoring programs (21 percent) have a separate budget. For programs with their own budget, the median total budget for 1987-88 for tutoring programs is about seven times ($30,000) greater than that of mentoring programs ($4,225).

Programs with a separate budget were asked to indicate the costs that their budget covered.[8] Interestingly, while small programs share their budget to a much greater extent than do medium and large programs, small programs are also more likely to be responsible for tutor compensation, coordinators' salaries, transportation, training, and special events. "Materials" is the budget item most frequently accounted for by all programs, regardless of size. Eighteen percent of medium-sized programs and half as many small programs must cover building costs.

Program Evaluation

Sixty percent of tutoring programs and 52 percent of mentoring programs reported that they conduct program evaluations, and both types of programs reported that they had achieved high levels of attainment across all their program goals. Tables 10 and 11 summarize the reported level of goal attainment for tutoring and mentoring programs, respectively.

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[8] Only 6 percent of mentoring programs with a separate budget and 3 percent of tutoring programs with such a budget must share it with another institutional program (not necessarily of the same type). Program size is a strong determinant of whether or not separate budgets are shared. Medium-sized and large programs share separate budgets to a far lesser degree (5 and 7 percent, respectively) than do small programs (25 percent).

Table 10

Evaluation of Tutoring Programs' Success
in Meeting Their Goals

Goals	Percent of programs specifying this goal	Level of goal attainment		
		Not at all successful	Somewhat successful	Very successful
For students receiving tutoring services:				
Improve basic skills	99	2	22	75
Improve self-esteem	96	3	15	78
Provide role models	90	2	10	78
Prevent dropouts	68	10	29	29
Provide college exposure	62	4	9	49
Provide recreational/ cultural opportunities	62	11	19	32
Assist gifted/talented	42	8	15	19
Improve vocational skills	25	6	11	8
For tutors:				
Provide practical experience	87	1	10	76
Develop public service commitment	81	3	17	61
Provide non-campus experience	78	4	6	68

Table 11

Evaluation of Mentoring Programs' Success
in Meeting Their Goals

Goals	Percent of programs specifying this goal	Level of goal attainment		
		Not at all successful	Somewhat successful	Very successful
For students receiving mentoring services:				
Provide role models	99	0	5	94
Improve self-esteem	99	2	27	70
Recreational/cultural opportunities	89	10	18	61
Provide college exposure	86	8	6	72
Prevent dropouts	76	4	40	32
Improve basic skills	67	8	18	41
Improve vocational skills	43	12	15	16
Assist gifted/talented	42	7	5	30
For mentors:				
Develop public service commitment	92	2	18	72
Provide non-campus experience	78	0	13	65
Provide practical experience	66	1	8	57

Seventy-five percent of the tutor programs reported that they are "very successful" in improving students' basic skills; another 22 percent indicated they are "somewhat successful." Ninety-four percent of mentoring programs report that they are "very successful" in providing role models to students. Seventy percent of mentoring programs stated they are "very successful" in improving the self-esteem of the students they serve.

Seventy-six percent of the tutoring programs indicated that they are "very successful" in providing practical experience to tutors; another 10 percent are "somewhat successful." Seventy-two percent of the mentor programs indicated they are "very successful" in helping college students develop a public service commitment.

II. EFFECTIVENESS OF TUTORING AND MENTORING SERVICES

Although most tutoring and mentoring projects report that they meet their goals, no corroborative data are available that would permit a conclusion that college-based tutoring and mentoring projects improve the educational (or other developmental) prospects of disadvantaged children. Evaluations of college tutoring and mentoring projects, when available, tend to be confined to a single project or project model and to address questions of local interest. These studies do not exhibit either the breadth or rigor needed to draw conclusions about the effectiveness of college tutoring or mentoring programs, in comparison with other types of educational and social interventions in the lives of disadvantaged children. However, other research has been conducted on the effectiveness of tutoring and mentoring in improving the educational prospects of disadvantaged students, and it is useful in the context of this report even though the earlier research did not focus on services provided by college students.

Slavin (1987) reviewed seven controlled studies of tutoring provided to disadvantaged students in the elementary grades (generally by paraprofessional aides, teachers, or other trained adults); in all of these studies, the tutored children exhibited performance gains that exceeded the gains of similar students who were not tutored. Similar conclusions were expressed in a meta-analysis of sixty-five studies examining tutoring programs (Cohen, Kulik, & Kulik, 1982); the meta-analysis concluded that tutoring programs "have definite and positive effects on the academic performance and attitudes of those who receive tutoring."

An analogous review of research on mentoring is contained in Flaxman, Ascher, and Harrington (1988). The conclusions expressed in this review are considerably less definitive, however:

> When planned mentoring is intensive and extended, the support can help solve some of the contradictions [that disadvantaged youth experience in] moving into the mainstream of society. . . . The possibility of achieving even limited goals for planned mentoring depends, however, on accurately diagnosing the needs of the potential mentee, and in ensuring that mentoring--as opposed to other interventions--is best suited to the youth's problems.

The review of tutoring and mentoring effects conducted for this study indicates that many projects report results that are consistent with those described by Slavin, Cohen et al., and Flaxman et al., in different contexts. After examining relevant findings of local studies, this chapter identifies project features that are associated with tutoring and mentoring success. Because of the special policy relevance of service incentives to prospective tutors and mentors, we examine issues surrounding that topic in the third section of this chapter.

Results of Project Evaluations Concerned with the Effectiveness of Tutoring and Mentoring Services

Flaxman et al. (1988) explain the lack of evaluation in mentoring projects and similar services in terms of the programs' low funding levels, vague goals, and lack of organizational structure. Our research suggests that these circumstances may be changing as the number of programs grows and as mentoring and tutoring projects become more formalized and thus more likely to be scrutinized by potential funding sources that require evidence of previous success.

Other impediments to evaluation are described in a 1987 review of tutoring programs (Hedin), which explains that tutoring is an "extremely

complex interpersonal encounter, made up of multiple variables that are difficult to control and isolate." According to this observer, "The outcomes of a tutoring program could depend on any of the following variables: the frequency and duration of the sessions; the amount of tutor training; the sex, socioeconomic status, race, academic performance, and psychological maturity of the tutor; the motivational level of the tutee; the attitude of school teachers; the subject matter; and so forth." Moreover, she states, "It is far more difficult to assess affective or attitudinal change than academic achievement."

A lack of technical expertise has also impeded high-quality evaluation, although this problem is now being addressed. Under a grant from the MacArthur Foundation, Campus Compact, a national organization of IHEs concerned with promoting public service among students,[9] is developing evaluation strategies and guides to provide local projects with the tools to conduct valid assessments of their services.

The studies used in the following summary range from anecdotal reports of project effects to rigorous quantitative analyses of individual programs. We also refer to Hedin's overview of several program evaluations (1987) and the meta-analysis of studies examining tutoring projects (Cohen et al., 1982).

Effects on Students Receiving Services

Project evaluations have examined several different types of student effects that could be attributed to participation in tutoring and mentoring projects.

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[9] See Appendix A for descriptions of three national organizations that coordinate student volunteer activities--Campus Compact, Campus Opportunity Outreach League (COOL), and Youth Service America.

Increase in academic performance. Current studies have examined academic achievement outcomes more closely than any other type of student benefit, according to Hedin (1987). Although no comprehensive review of academic achievement outcomes is available, local project evaluations present evidence of overall project success in improving academic achievement.

- Our own review of nineteen tutoring and mentoring projects in the U.S. (see Appendix A) indicates that over half (eleven out of nineteen) report improvement in students' test scores, grades, and/or academic performance as a result of project services.

- Evaluations submitted by several IHEs (e.g., Mississippi State University and the University of Northern Colorado) in response to the tutoring/mentoring survey show significant improvement in the reading and math achievement scores of students who receive tutoring assistance.

- Teacher surveys administered by the Columbia College (Illinois) tutoring project, tutor evaluations from the CUNY Brooklyn College "I Have a Dream" project, and an informal report from St. John's University (New York) indicate improvements in reading, math, and writing skills.

- Teacher and tutor surveys conducted as part of the Georgetown University/D.C. Schools Project show differing perceptions of project success. Although tutors rate students' progress as "high" (an average of four, with five as the highest possible rating), teachers report that participants' academic progress was "slow."

The discrepancy in tutors' and teachers' perceptions of their students' progress (in the Georgetown project) indicates the variations characterizing the project assessments that are based on subjective information.

Four studies described in the professional literature also examine academic gains for students receiving tutoring or mentoring assistance.

- The Snyder-Union County, Pennsylvania, Juvenile Probation Department evaluated its Alternative Education program, which provides tutorial instruction to secondary school students who have been referred through the juvenile court for minor delinquency or truancy. In this program, tutors from Susquehana University and Bucknell University work with students on their college campus. Analysis of the academic outcomes of eighty-three students served during the period 1980-84 (Herbst & Sontheimer, 1987) shows that sixty-four were promoted, six were retained in grade, three graduated (out of

four seniors), seven dropped out to pursue a GED (no indication given of whether these students attained their GED), and three dropped out with no further educational activity.

- Another study (Valenzuela-Smith, 1983) evaluated a project that served twenty-two Hispanic students in a junior high school in rural Antelope Valley, California, and involved twenty-two Spanish-proficient students from a Los Angeles community college who served as mentors to the younger students. The evaluation indicates gains in the oral English and report card grades of all participants. Moreover, all twenty-two students enrolled in high school rather than dropping out. There were no gains, however, in reading scores, scores on a self-concept measure, or school attendance.

- Powell, Wisenbaker, and Connor (1987) evaluated the academic effectiveness of an intergenerational tutoring program serving children from low socioeconomic backgrounds in Athens, Georgia. Forty-two percent of the tutors were college students, and the rest were other volunteers (e.g., retirees, housewives). Although the students who participated in the program in 1983-84 had greater average gains in reading and math achievement and more favorable changes in absenteeism than did their nonparticipating counterparts, the differences were too small to be statistically significant.

- The meta-analysis of findings of school tutoring programs (Cohen et al., 1982) found achievement gains for tutored students. Most of the studies (forty-five out of fifty-two) that described test performance report that the tutored students scored higher in academic areas than students who were not tutored.

Several studies of tutoring and mentoring programs conducted outside the United States also examined whether participants experienced academic gains.

- The Imperial College of Science and Technology in London surveyed pupils, tutors, and teachers participating in the Young Scientist Scheme (Goodlad, 1988). In response to survey questions, 43 percent of the pupils reported that their academic performance had improved since they began the program. In addition, 98 percent of the teachers reported that their students had learned more after being tutored (Goodlad, 1988). An earlier evaluation of this project (Goodlad, 1985) indicated that 64 percent of the pupils found that their lessons were easier to follow when tutors were present.

- Three systematic quantitative evaluations of the Perach tutoring program in Israel were performed between 1978 and 1982. The studies compared experimental and control groups on measures of math, English, general knowledge, and attitude. The first two studies found negative achievement gains among the Perach participants, in comparison to the control groups. The third study showed positive gains for participants, although these gains may have been due to a

high drop-out rate for children in the experimental group (Fresko & Eisenberg, 1985).

Our examination of studies of academic growth attributable to tutoring or mentoring revealed one study with special relevance to instructional programs serving disadvantaged students. This Canadian study (Schwartz, 1977, described more fully in Appendix B) evaluated a tutorial program serving low-achieving seventh-graders. The program trained college students to serve as reading tutors and "contingency managers" of students' development of reading skills and interests. Improved reading performance and school-related behaviors allowed students to earn tokens, which were later exchanged for grades. The evaluation, which randomly assigned students to treatment and control status, indicated "significantly greater increases in reading scores of experimental groups, compared to control groups, substantial improvement in target behaviors, and significant changes in verbalizations toward reading." Findings from standardized pretests and posttests indicated that the average reading increase for tutored students was 2.1 grade levels, compared to 1.0 grade level for control groups. Six-month follow-up studies showed that all groups "consolidated their gains and that their grade scores continued to improve" and that the lowest-scoring students improved the most.

Improvement in motivation and attitude towards education. Our review identified several tutoring or mentoring projects that had measured change in participants' attitude and motivation. These include the following:

- The Berea College (Kentucky) Students for Appalachia project found improvements in motivation and attitudes associated with their project. Their evaluation used an informal interest survey of students and a questionnaire administered to tutors.
- Based on a survey of teachers, the projects at Columbia College and St. John's University also found improvements in tutored students' attitude and motivation.

- The Ravenswood-Stanford Tutoring Program reported that 75 percent of the teachers and tutors who completed an end-of-year survey observed positive academic and attitudinal changes in tutored students.

- The Mississippi State University Language Arts Practicum surveyed program participants and nonparticipating peers and found a significant project-related increase in attitude toward school among participants.

- Based on responses to questionnaires, an evaluation of the CUNY Student Mentor Program found that the program creates favorable educational experiences for mentored students and prepares them to set realistic educational and career goals (Gregory & Berley-Mellits, 1988).

In addition, two studies reported in the professional literature describe attitudinal gains for tutored students.

- The evaluation of the Antelope Valley tutoring program (Valenzuela-Smith, 1983) includes analyses of teachers' and mentors' responses to a behavior assessment questionnaire. It indicates that participants' school behavior improved as a result of project participation. In addition, the students themselves report that the program helped alleviate their anxiety about going to high school.

- The meta-analysis (Cohen et al., 1982) reports that students' attitudes towards their academic subjects improved as a result of tutoring, although the sample sizes were small. All eight of the studies reporting on student attitudes found a positive change in attitude among tutored students when compared to other students.

Two programs conducted overseas also report attitudinal gains for tutored students.

- The Oxford University Joint Action Committee Against Racial Inequality (JACARI) program in England found that the project has a positive effect on student attitudes and toward learning in general, based on questionnaire responses from tutors and students.

- The Perach tutoring program conducted a follow-up study to determine whether the program has any sustained or delayed effects on participants (Eisenberg, 1983). Results of a mail survey administered to students who had participated two years earlier and a control group indicate that tutored students have higher aspirations and are more likely to report that they are succeeding in their academic subjects. Evaluators concluded that the principal sustained effect of tutoring is the increased value that participants attach to education.

Successful exposure to new environments and role models. More than one-third (seven out of nineteen) of the project evaluations available to us from projects in the United States report that tutored or mentored students benefited from exposure to the college setting and from learning about the lifestyles of their tutors and mentors.

- The Berea College project evaluation indicates that exposure to college resources and role models contributes to the overall success of tutored students.
- Informal observations and anecdotal reports of tutors, students, and project staff indicate that students participating in the Notre Dame University Neighborhood Study Help Program and the CUNY Brooklyn College/Macy Foundation Project develop strong mentor relationships.
- Findings from a teacher survey of the Georgetown University/D.C. Schools Project indicate that the college students' function as role models is a valuable program component.
- Questionnaire data from an evaluation of the CUNY Student Mentor program indicate that students benefit from exposure to college, exploring options, gaining tools to help plan their futures, and forming new, positive relationships (Gregory & Berley-Mellits, 1988).

Increase in self-esteem and self-confidence. Five U.S. projects for which we obtained project evaluations report increases in students' self-esteem. For example:

- Based on a survey of participating students and a questionnaire filled out by tutors, the Berea College program concluded that tutoring services increase participants' self-confidence and openness and raise their expectations for their own success.
- Using a pretest/posttest design, the Catholic University Afterschool Program found that participants score low on self-esteem measures prior to receiving services and, following the establishment of mentor relationships, gain in self-esteem.
- Tutors participating in the CUNY Brooklyn College "I Have a Dream" project report that their students improve in self-confidence and willingness to attack problems.

The meta-analysis (Cohen et al., 1982) also reports improvement in students' self-concepts in seven out of nine studies that addressed this issue.

Overall benefits. Three U.S. programs report that participating students experience overall benefits as a result of tutoring or mentoring.

- Anecdotal reports of program coordinators and tutors in the American University program state that both tutors and students experience "positive results."
- Tutors and teachers from the Connecticut College Tripartite Tutoring program indicated on an informal checklist that student participation in the tutoring program leads to improvements in school.
- The Notre Dame University project compiled informal observations of tutors, teachers, and coordinators, in which participating students are reported to view the program as "fun and educational" and to have an overall "positive feeling" about the program.

The Oxford University JACARI program also reports overall gains for participants, based on questionnaire results.

Effects on Tutors and Mentors

Programs that provide tutoring and mentoring services generally also aim to provide benefits to the college students who deliver services.

Practical experience and improved interpersonal skills. Almost half of the local project evaluations we obtained from U.S. projects (eight out of nineteen) report that tutors and mentors gain practical experience and improve their interpersonal skills as a result of their service activities. A major difference among the projects is the extent of their focus on pre-professional experience.

- The East Palo Alto/Stanford Summer Academy project provides tutors with practical experience in preparation for a teaching career.

- Reports from the CUNY Brooklyn College/Macy Foundation project indicate that tutors receive a solid foundation in teaching techniques and experience.

Other programs emphasize practical experience as part of a well-rounded education and as a complement to academic theory.

- Tutors in the Berea College project indicated on a questionnaire that they experience increases in group identity and in leadership and communication skills.

- Tutors in the Mississippi State University Language Arts Practicum reported that they gained experience and applied academic theory in a practical setting.

- Mentors participating in the CUNY Student Mentor program indicated on a questionnaire that they obtained hands-on experience in the helping professions and in developing skills required to reach persons with problems.

Our contact in Amsterdam found in his review of research describing findings from several Dutch tutoring programs that a majority of the college-age tutors serve in that capacity while they are training to become teachers and are taking teacher training courses. As part of the teacher training curriculum, tutoring provides an exposure to pedagogical and psychological problems affecting the instruction of disadvantaged students. Tutors also learn to assist students in coping with these problems.

Findings from an open-ended questionnaire distributed to teachers, tutors, and students participating in the Imperial College of Science and Technology Young Scientist program in London indicate that 95 percent of the tutors gain "useful practice in communicating scientific ideas" (Goodlad, 1985).

Increase in commitment to community service. Project evaluations from four U.S. programs indicate that tutors become more interested in community service as a result of their tutoring or mentoring experience. Projects

reporting this effect include those at Berea College, Columbia College, and Notre Dame University. An informal report from St. John's University states that high levels of tutor commitment are demonstrated by the fact that approximately 75 percent of the tutors work with their students for more than the required sixty hours per semester and that they continue to tutor after the end of the college academic year.

Increase in self-esteem and self-confidence. Four U.S. programs report that tutors gain self-esteem and self-confidence as a result of their service opportunity. For example, informal reports from staff meetings and supervisory sessions show that the Catholic University Afterschool Program tutors improve their self-esteem as a result of the tutoring experience. The CUNY Brooklyn College "I Have a Dream" tutors report gains in confidence and knowledge of themselves on self-evaluation focuses. Anecdotal reports from tutors and staff of the CUNY Brooklyn College/Macy Foundation project indicate that tutors experience strong personal gains as a result of their involvement.

The meta-analysis (Cohen et al., 1982) found that three-quarters (twelve out of sixteen) of the studies reporting on tutors' self-concept describe improved self-concepts for tutors as a result of tutoring.

Exposure to new cultural settings. This benefit is emphasized by tutors participating in two U.S. projects. The Berea College project found that tutors increase their familiarity with and understanding of different cultural settings as a result of their involvement in the program. Tutors from the CUNY Brooklyn College "I Have a Dream" project also indicated on an evaluation form that they attained a better understanding of the environment in which disadvantaged students live and improved in their ability to relate to them.

Improved academic performance. The Catholic University Afterschool Program reports that end-of-year grades indicate that mentors improve their academic performance.

The meta-analysis (Cohen et al., 1982) reports that most studies (thirty-three out of thirty-eight) found tutors perform better on exams in the subjects they tutor. They also found that most studies (four out of five) reporting on tutors attitudes toward their subject matter describe positive changes in attitude.

Effects on the Community

Four U.S. projects report anecdotally that their programs have positive effects on the community.

- The Notre Dame University Neighborhood Study Help Program reports that their program breaks down barriers and improves relations between the university and its partner in the project, St. Mary's College, on the one hand and the South Bend community on the other.
- The Berea College project also reports that tutoring services improve "town-gown" relations.
- The Catholic University Afterschool Program describes the effects of its program as a "mutually beneficial interaction" that provides a means for the university to give something back to the community.
- The Ravenswood-Stanford Tutoring Program found that Stanford is perceived more positively as a result of increased involvement with the community and its successful collaborative effort to improve basic problems regarding children's achievement and morale.

The evaluative study of the Alternative Education Program, sponsored by the Snyder-Union County, Pennsylvania, Juvenile Probation Department, indicates several benefits to the juvenile court, the school system, and parents (Herbst & Sontheimer, 1987). Due to the program's success, the number of official referrals for truancy has declined, and fewer fines are levied against parents for their children's truancy.

Though useful as an overview in understanding the benefits that individual projects experience, information on project success does not indicate what the most important features of a tutoring or mentoring project are. The next section describes current evidence on program features.

Key Program Features in the Delivery of Tutoring and Mentoring Services

Program features vary across projects due to differences in individual program needs, resources, and goals. However, our telephone interviews and research review identified several components of tutoring and mentoring programs that are commonly found in programs that are perceived by observers and participants to be "working well." Programs that report problems often attribute their difficulties, in part, to deficiencies in these key areas.

Time Use and Commitment of Tutors and Mentors

According to the national survey of college tutoring and mentoring programs (Westat, 1989), students typically spend three hours per week with their tutors or mentors, although several students may share the services of a single tutor or mentor. There is a great difference in the number of students assigned to each tutor or mentor based on program size. On average, small programs (eight or fewer tutors or mentors) assign five students per tutor or mentor, medium-sized programs (nine to twenty-one tutors/mentors) assign three students to a tutor or mentor, and large programs (twenty-two or more tutors/mentors) only assign one student. These data indicate that as programs increase in size they do not necessarily serve larger numbers of students. Rather, they tend to serve students on a more individualized basis.

As one would expect, tutors and mentors spend their time with students quite differently. On average, 59 percent of a tutor's time is spent on basic

skills remediation, and another 28 percent is spent assisting with homework; thus, a total of 87 percent of a tutor's time is spent on academic activities. On the other hand, mentors average 39 percent of their time in recreational or cultural activities with their students. An additional 30 percent of a mentor's time is consumed by other activities related to serving as a role model, such as counseling (on both personal and career concerns). Mentors use the remainder of their time to provide basic skills remediation (21 percent) and assist with homework (10 percent).

Interview data and program literature emphasize the importance of a defined time commitment for tutors and mentors. Clearly outlined expectations for the duration and conditions of tutoring and mentoring sessions help minimize schedule conflicts, absenteeism, and turnover, which may cause disadvantaged youth to feel rejected and frustrated. According to interviews, the time commitment should be sufficient in session length and overall duration to provide consistent, ongoing service to needy youth. Based on the experience of its member institutions, Campus Compact recommends that mentors make at least a "one-year time commitment of three hours a week to build the trust and rapport that foster a close, persistent relationship" (Campus Compact Newsletter, February/March, 1989).

The survey data indicate that an overwhelming majority of tutoring (97 percent) and mentoring (86 percent) programs expect college students to make an explicit service commitment (Table 12). Programs with these expectations have high rates of service completion by tutors (93 percent) and mentors (91 percent). The average length of expected service in these programs is around twenty weeks.

Table 12

College Student Time Commitment to Tutor or Mentor Programs

Commitment to program	Tutoring	Mentoring
Percentage of programs in which students are expected to make a commitment to serve	97	86
Mean number of weeks of expected service	19	22
Mean percent of students completing commitment (of programs that expect students to make a service commitment)	93	91

Participants in the 1989 Bay Area Tutoring Conference, held at Stanford University, emphasized commitment, because it provides "integrity and a sense of importance to the tutor, as well as a clear understanding of what will be expected from the volunteer." They said that there is a positive relationship between successful recruiting of effective tutors and clear articulation of the expected commitment.

Several programs (e.g., St. John's University, Stanford University, Connecticut College) require tutors and mentors to sign contracts binding them to a specific time commitment and outlining responsibilities, expectations, and goals. Participants in the Bay Area Tutoring Conference endorsed the use of such contracts. Contracts may also incorporate the college and public school calendars to avoid schedule conflicts and vacation breaks, which may disturb the continuity of the program. Campus Compact finds that "successful

programs avoid this problem [of scheduling inconsistencies] by encouraging letter-writing, phone calls, and visits" (Campus Compact Newsletter, February/March, 1989).

Screening and Matching

Screening. As service providers, tutors and mentors work with a fragile population. Programs thus need to screen potential tutors and mentors to ensure that competent and altruistic students are recruited. This is particularly important in mentoring projects, because mentoring requires a willingness to establish a relationship, act as a role model, and appreciate different cultural and socioeconomic backgrounds. Campus Compact states that the "unique characteristics involved in establishing a mentor relationship demand careful screening" (Campus Compact Newsletter, February/March, 1989).

Screening techniques currently in use vary from simple application forms to extensive interview sessions and may include essay assessments, questionnaires, interest inventories, and reference checks.

The program staff of the CUNY Student Mentor program, in conjunction with CUNY's legal department, has developed a comprehensive screening instrument that requires information on the prospective mentor's background, with attention to drug use and criminal history, especially as a child abuser. A recommendation is required from a former employer or professional who knows the applicant, can assess the individual's relevant background characteristics, and knows whether the applicant can be a positive role model. A minimum grade point average (GPA) of 2.5 is also required.

Personal interviews are often used to select potential tutors and mentors. The Catholic University Afterschool Program interviews students to assess their communication skills, their academic strengths and weaknesses,

and to obtain other personal information (e.g., financial situation, other job commitments). Students must demonstrate a willingness to devote substantial time to serving children in the community and have a minimum GPA of 2.5.

Matching. Pairing the diverse needs and backgrounds of disadvantaged youth with the skills, interests, and backgrounds of tutors and mentors can increase the effectiveness of tutor and mentor programs. Particularly for mentoring programs, which involve the establishment of sensitive relationships, good matching can foster an understanding and appreciation between the mentor and student, which will facilitate successful role modeling and attitude and skill development.

Matching tutors and mentors with students is a responsibility for two-thirds of the program directors, as indicated by survey respondents. A majority of all programs report that assistant coordinators also share this responsibility.

In their literature review of mentor programs, Flaxman et al. (1988) report that the "principle of similarity is most commonly used to pair mentors and mentees (e.g., age, sex, race, cultural similarities, geographic proximity, interests, career aspirations, and hours available)." However, as the survey data in Chapter I indicate, there are some notable differences between mentors (and tutors) and the students they serve in the areas of sex, race, and cultural background.

Techniques for matching tutors or mentors and students vary, ranging from use of interest inventories to allowing youth to choose their preferred mentors during informal group sessions (Campus Compact Newsletter, February/March, 1989). Flaxman et al. (1988) found that "in a program where mentors and mentees are given a chance to choose each other, the planned

mentoring becomes more like spontaneous natural mentoring, which involves an open, varied, and long-lasting relationship."

CUNY's current pairing process exemplifies the mutual selection technique. It employs a series of personal familiarization opportunities, including interviews between mentors and students, self-profiles, and games to develop friendly contact between the two groups. These techniques are reported to be easier to use with the program's current afterschool, on-campus format. By the fifth week of the program, when formal pairing occurs, both mentors and students have a good idea of whom they would like to work with.

The Connecticut College Tripartite Tutoring program uses traditional matching techniques in which students are paired with tutors having similar backgrounds and interests. Teachers and prospective tutors complete forms specifying the types of assignments sought, relevant experience, skills, schedules, and student needs; the students to be tutored also provide biographical and academic information.

Training and Monitoring

Training. The importance of training for tutors and mentors is indicated by the survey data and interviews with local program coordinators and school system personnel. Nearly three-quarters of tutoring programs and two-thirds of mentoring programs provide preservice training; 61 percent of both program types require participation. The usual number of preservice hours provided is six.

Training is particularly important when there are racial, cultural, and socioeconomic differences between tutors or mentors and the students they serve. Campus Compact recommends that training programs "prepare mentors to respond appropriately to a variety of situations and cover issues such as

child development, substance abuse, domestic violence, teen pregnancy, racial and cultural sensitivity, and socioeconomic issues influencing youth" (Campus Compact Newsletter, February/March, 1989). The Compact also emphasizes the importance of seeking outside help and using community resources for professional support. Techniques such as focusing on interpersonal and communication skills and enlisting community experts as speakers and workshop leaders for various topics are also recommended by Campus Compact.

CUNY mentors receive intensive training during four meetings with their coordinators before being paired with a student. Topics discussed during these sessions include components of the career-focused program curriculum, relationship building, values clarification, and goal setting. Mentors receive ongoing training and assistance through weekly meetings with their coordinator and other mentors to share their experiences. CUNY coordinators (at the high schools and colleges) also receive a comprehensive handbook that discusses the topics covered in the training sessions and the activities to be conducted during the semester-long program.

Our telephone interviews indicated some areas where training could be improved. In particular, teachers report that tutors would benefit from learning more about the school curriculum and about the resources and materials available in their schools. These teachers express a desire to be involved in the preservice training of tutors to help address this need. (This type of involvement would go beyond the more general "contact" reported between teachers and tutors/mentors and described later in this chapter.) In addition, some program staff report that classroom teachers need inservice training on how to involve tutors and mentors productively.

Monitoring. Monitoring of tutors and mentors and ongoing training sometimes overlap, depending on how each is defined by a program. Ongoing training may be used as both a monitoring technique and an enrichment strategy.

The monitoring of tutors and mentors allows program staff to assess progress and to identify and address problems at an early stage. A review of programs by Campus Compact indicated that the experience of established programs, such as Big Brothers/Big Sisters and Career Beginnings, underscores the importance of monitoring the mentor relationship as a form of "quality control" (Campus Compact Newsletter, February/March, 1989). The ideal monitoring strategy, according to Campus Compact, involves program staff who provide guidance, supervision, and a liaison with parents and teachers. This technique allows feedback to occur among all participating parties, which helps ensure that goals, expectations, and needs are met.

The survey conducted for this study defined monitoring as "direct observation of tutors/mentors for the purpose of improving tutoring/mentoring." A majority of tutoring programs (71 percent) and mentoring programs (64 percent) report that they provide this type of supervision (Table 13). More than a third of the tutors and mentors are monitored on a weekly basis and about two-thirds are monitored at least monthly.

In addition to monitoring, most tutoring programs (78 percent) and mentoring programs (81 percent) include regular meetings between tutors and mentors and their program coordinator, with more than 50 percent of tutors and mentors meeting with their coordinator two to four times per month.

Table 13

Percent Distribution of Programs That Monitor Tutors and Mentors, by Type of Primary Service Provided and Frequency of Monitoring

Monitoring	Tutoring percent	Mentoring percent
Weekly	35	36
Biweekly	11	9
Monthly	18	20
Less than monthly	7	1
None	29	34
	100	100

Interview data indicate that regular discussion sessions that allow open discussion and provide feedback are an effective monitoring and improvement technique. Local projects employ other monitoring methods as well. The Berea College program, for example, uses several that evolved in response to program needs. These include tutor log books (which document each session's activities and the tutor's personal reflections), staff meetings and enrichment sessions, and end-of-semester tutor evaluations conducted by the director. In addition, the project employs what personnel termed a "loose monitoring system" that consists of ongoing contacts with teachers and parents. This technique allows staff to assess tutor/student progress and also serves as "crisis monitoring."

Other programs use a formal organizational structure for monitoring purposes. The Notre Dame Neighborhood Self Help Program reports that its monitoring system is built on a hierarchical administrative structure and clearly defined roles. Student leaders on the project's Executive Committee (which also includes school system representatives) are responsible for monitoring and fundraising, providing training and materials, and making changes that evolve from monitoring. Thirteen student captains, who report to the student leaders, monitor mentor activities at their respective sites. They also act as liaisons between student leaders (and the Executive Committee) and mentors by supervising mentors, assessing problems, and devising solutions. Captains meet once a month to discuss program operations and mentor problems.

The absence of monitoring strategies can be a significant impediment to the achievement of measurable positive outcomes, as has been reported, for example, in Israel's Perach program.

Maintaining Close Relations Between the School System and IHE

The importance of local support and collaboration is a special emphasis of Youth Service America (YSA), a national coordinating group concerned with promoting youth volunteer services. In a recent publication, YSA states that principles of best practices include "responding to local needs, planning and administering programs at the state and local levels, and becoming an integral part of community and school policy affecting youth and human services" (YSA, 1989, "Recommendations--Federal Involvement"). Campus Compact also actively encourages the collaboration of IHEs with local school systems, community organizations, and state policy makers (see Appendix A).

Some examples of collaboration strategies include the following:

- Berea College developed closer working relationships with public school teachers, guidance counselors, school psychologists, and administrators by holding scheduled meetings throughout the semester, informing schools which students were being tutored, involving tutors in parent-teacher meetings, and clarifying the roles of tutors, program staff, and school personnel.

- Catholic University's program recently added a part-time coordinator to its staff to facilitate communication among teachers, social workers, counselors, and tutors.

Over one-half (59 percent) to over four-fifths (82 percent) of tutor and mentor programs report high degrees of cooperation between (1) tutors or mentors and classroom teachers, (2) tutors or mentors and parents, (3) program coordinators and classroom teachers, and (4) program coordinators and the school district or school principals (Westat, 1989).

The survey data also indicate that tutor programs have a higher degree of contact than mentor programs between (1) tutors and classroom teachers, (2) program coordinators and classroom teachers, and (3) program coordinators and school districts (Table 14). This fact may be due to the larger percentage of tutoring activities that occur in the participating elementary/secondary students' school and the higher percentage of time spent engaged in academically related activities. Mentor programs, however, have a slightly higher degree of contact with the students' parents.

Almost half of all tutoring occurs at the school of the students served, while over half of the mentors serve their students on the college or university campus (Table 15). Such services are much less likely to be provided at community centers or in a student's home.

About half of the college students who provide mentoring services receive help with transportation from their sponsoring college or university (42

Table 14

Program Contacts, by Primary Service Focus

Contacts	Tutoring percent	Mentoring percent
Between tutors/mentors and classroom teachers	81	59
Between tutors/mentors and parents	67	72
Between program coordinators and classroom teachers	77	59
Between program coordinators and school district or school principals	82	64

Table 15

Most Frequent Place for Tutoring and Mentoring Activities

Most frequent place	Tutoring percent	Mentoring percent
On college campus	37	61
Elementary or secondary school campus	49	19
Community center/agency	9	6
Student's home	2	2
Other	3	12
	---	---
	100	100

percent) or the mentored students' school (7 percent). Less than a third of college tutors receive such help from either their sponsoring institution (23 percent) or the participating schools (3 percent).

Because an ample supply of able, enthusiastic college students is essential for the success of any tutoring or mentoring program, we turn now to a review of incentives for ensuring the availability of potential tutors and mentors.

Incentives for College Students to Serve as Tutors or Mentors

The survey data indicate that tutoring and mentoring programs employ a range of incentives for rewarding college students who serve as tutors or mentors (Table 16). These include practical and tangible rewards, such as

Table 16

Types of Incentives Offered for Tutor or Mentor Participation, by Type of Primary Service Provided

Incentive (multiple responses allowed)	Tutoring percent	Mentoring percent
Recommendations	58	42
Academic credit	45	33
Dinner	36	57
Cash stipend	34	24
Certificate	27	48
Tuition fee/reimbursement	8	8
Other	20	10

academic credit or cash stipends and, less frequently, the reimbursement of tuition or fees. Programs also offer other incentives that highlight the nature of the service they provide; these include recommendations, recognition dinners, and certificates.

The survey data show that tutors are more likely to receive academic credit or cash stipends for their services than are mentors. Only 8 percent of the programs offer tutors or mentors tuition or fee reimbursements as an incentive to participate. Tutors receive a higher percentage of recommendations for potential employment or graduate school than do mentors, whereas mentors are almost twice as likely as tutors to receive a certificate documenting their service.

Despite the availability of incentives, project staff report that more than one-third of the tutors (35 percent, as shown in Table 8) and two-thirds of the mentors (67 percent) volunteer their services without an expectation of either monetary payment or academic credit. Telephone interviews conducted for this survey found no IHEs that require tutoring or mentoring without providing either stipends or academic credit.

Our own review of projects that offer varying types of encouragement and rewards suggests that incentives such as stipends and academic credit are more likely to be offered in projects that are highly structured and that make greater demands in the areas of training, monitoring, and coordination of activities (e.g., the projects at Berea College, CUNY, American University, Catholic University). Conversely, projects that impose few such requirements for project participation are likely to rely on honorary rewards and encouragement (e.g., Carleton College, University of Pennsylvania's West Philadelphia Tutoring Collaboration, University of Texas).

In their examination of mentoring programs, Flaxman et al. (1988) point out one of the considerations in deciding whether to offer concrete incentives:

> Extrinsic rewards may help extend the mentor's patience during a difficult period, but they may also encourage 'volunteers' who are less interested in mentoring and the individual mentee than in the extrinsic rewards.

This concern that financial incentives might overshadow students' altruistic motives for service is expressed by several local program coordinators whom we interviewed. For example, the coordinator of the tutoring program at American University said that the project awards tuition reimbursement stipends (of $1,000) at an annual end-of-the-school-year ceremony honoring the accomplishments of tutors and their students, in order to make sure that the monetary incentive does not overshadow the personal value of the service itself. (The stipends are applicable to the next semester's tuition; graduating seniors thus cannot make use of the incentives unless they are staying on for graduate school.)

Project coordinators pointed out other considerations in deciding whether to provide financial incentives. For example:

- Program experts at COOL, a national coordinating group concerned with promoting public service by college students, and a project coordinator at Stanford University noted that the provision of financial compensation makes it easier for local projects to establish program requirements, such as screening of prospective tutors and mentors, participation in training, and close monitoring of their work.

- The program coordinator at Catholic University said that service programs must offer financial incentives in order to compete with other possible outlets for students' energies, especially since many students are burdened with significant financial debt. This coordinator also expressed a belief that students should receive some financial compensation for what is often a very demanding, emotionally draining responsibility.

In determining how to provide financial incentives, the Catholic University coordinator said that stipends are most effective when they are paid on an hourly basis. At Catholic, the student stipend of $950 a year is provided in return for a minimum of five hours of work a week over forty weeks, which averages $4.75 per hour.

In deciding whether to provide financial or academic incentives, it may be useful to differentiate between tutoring and mentoring programs. Tutoring projects provide a direct, measurable service, whereas mentoring projects tend to focus on the establishment of certain types of relationships. The larger percentage of mentoring projects that rely on student volunteers (compared to tutoring projects that are staffed with volunteers) suggests that the projects themselves may perceive that mentoring is more appropriately conducted as a volunteer activity--rather than as a task that generates financial compensation.

However appropriate voluntary services may be in the context of certain situations, the fact remains that many college students do not have the financial freedom to choose voluntary service over paid employment. The final chapter of this report describes options for using federal funds as leverage to increase the availability of tutoring and mentoring services.

III. CONSIDERATIONS IN PROVIDING FEDERAL SUPPORT FOR TUTORING AND MENTORING SERVICES

The legislative provisions for this study of tutoring and mentoring services require the secretary to "determine the role the federal government should play in promoting and encouraging such programs." Two broad findings of this study are important in considering whether special federal assistance is warranted for the support of tutoring and mentoring services. The first, based on evaluations conducted by others, is that tutoring and mentoring services can be effective in improving the educational experiences of disadvantaged students. The second is that many colleges and universities are sufficiently convinced of the success of these programs to support them, despite a lack of substantial outside funding.

Given current limits on federal spending, decisions on "promoting and encouraging" possible new federal initiatives--such as one to provide financial support for tutoring and mentoring programs--should either (1) be based on data indicating that the new programs would generate benefits that are superior to the benefits of existing federally supported services that would be displaced by a new spending program or (2) build on current federal programming without requiring significant new spending. This study did not obtain information that would fulfill the first of these conditions (e.g., a comparison of tutoring and mentoring with other strategies for improving the education of disadvantaged students). Based on our analysis of the fit between tutoring and mentoring services and several current federal education programs, however, this chapter suggests directions for a modest strategy of

"promoting and encouraging" the establishment and expansion of tutoring and mentoring services, which could build on four current federal programs.

To explain the components of such a strategy, this chapter (1) describes the suitability of these four federal programs as potential sources of support for tutoring and mentoring services and (2) presents a set of principles that might serve as the basis for a federal support strategy.

Suitability of Current Federal Programs as Sources of Support

Our research identified four federal education programs that are appropriate sources of federal programmatic support for tutoring and mentoring. Two of these--the Fund for the Improvement of Postsecondary Education and College Work Study--currently provide low levels of financial support for tutoring and mentoring programs.

Chapter 1

Federal law requires Chapter 1 projects in school districts to provide supplemental services "to meet the special educational needs of educationally deprived children" (Section 1011(a)(1) of P.L. 100-297). As described by the federal Chapter 1 program director, these services must be part of "an organized, consistent instructional approach . . . that intimately involves teachers and principals" in project development and implementation. Provisions imposing this requirement specify that a participating school district is required to (1) conduct an annual assessment of educational need, which must be used to identify educationally deprived children with the greatest need for special assistance; (2) design and implement a project that is of sufficient size, scope, and quality to give reasonable promise of

educational success; and (3) periodically evaluate project success in assisting students to master basic and more advanced skills.

As these and other program provisions indicate, Chapter 1 imposes a number of restrictions on the selection of participants and the services they receive. Although none of these restrictions creates actual barriers to the use of college students as tutors and mentors, careful planning would be required to integrate any of the projects we learned about into a Chapter 1 setting. We foresee the following integration issues:

- Because Chapter 1 focuses on academic instruction, mentoring services that emphasize improvement in student attitudes and self-esteem could not be supported with Chapter 1 funds, unless these services had a clear role in supplementing defined academic areas. (However, several mentoring projects include secondary goals of basic skills improvement and homework assistance. Chapter 1 funds could be directed toward these latter activities.)

- Chapter 1 funds could be used for tutoring a particular student only if the district had already selected that student to receive Chapter 1 services--by virtue of enrollment in a selected grade in a selected school and evidence of a relatively high level of educational need.

- Materials or equipment purchased with Chapter 1 funds and used in a tutoring project could not be used for purposes other than Chapter 1 or to serve students not selected for Chapter 1 (unless costs were prorated).

Despite these issues, there are many good reasons for linking tutoring and, possibly, mentoring services to Chapter 1 as part of a larger federal support strategy. Among them are the following:

- Because of its size, Chapter 1 programs identify and serve many of the nation's disadvantaged children, at least those in the elementary grades. Tutoring and mentoring projects that aim to serve disadvantaged children will, in general, find many of them participating in Chapter 1 projects for part of their school day.

- Given the supplementary nature of Chapter 1 instruction, tutoring activities can generally be coordinated with Chapter 1 services. Chapter 1 staff are familiar with the problems and opportunities posed by a supplementary instructional service such as tutoring and

have experience in integrating supplementary instruction with regular classroom services.

In addition, program staff report that there are no legal problems with using Chapter 1 funds to reimburse expenses (such as transportation and materials) associated with tutoring Chapter 1 participants. Also, if the school system so desires, it can contract with a higher education institution for tutoring services; under such a contract, Chapter 1 funds can be used to pay for training tutors and teachers.

These factors suggest that Chapter 1 can be used as part of a larger strategy for promoting tutoring and mentoring. Because of its programmatic restrictions, especially with regard to mentoring, however, Chapter 1 would not be appropriate as the sole vehicle for federal encouragement of these services.

Chapter 2

Chapter 2, as modified by the Hawkins-Stafford Amendments and now known as the "Federal, State, and Local Partnership for Educational Improvement," can provide federal support to tutoring and mentoring programs such as those examined in this study. As described by Chapter 2 program staff in ED:

- Tutoring and mentoring services could easily be justified under three of the six "targeted assistance programs" (Section 1531(b) of the act) that are the basis for state and local activities under Chapter 2. The three are (1) programs for at-risk students, (2) "programs designed to enhance personal excellence of students and student achievement," and (3) "other innovative projects which would enhance the educational programs and climate of the school."

- Chapter 2 authorizes any state education agency (SEA) or school district receiving a Chapter 2 grant "to make grants to and enter into contracts with . . . institutions of higher education . . ." (Section 1532(b)). This authority means that formal relationships with colleges and universities can be arranged and Chapter 2 funds can be used to support program activities involving these institutions.

- One popular use of Chapter 2 funds is mini-grant competitions, in which individual schools and teachers compete to obtain support for activities of their own design. These arrangements are particularly appropriate support vehicles for tutoring and mentoring projects, given the small scale and operating costs that typify them.

The major impediment to using Chapter 2 for promoting tutoring and mentoring services is that the law does not allow SEAs (and, by implication, ED) to influence the design of local Chapter 2 programs so long as the local programs comply with the law. This requirement is stated in the following provisions:

- SEAs must assure that, "apart from technical and advisory assistance and monitoring compliance with this chapter, the SEA has not exercised and will not exercise any influence in the decisionmaking processes of local educational agencies as to the expenditures made pursuant to an application under" Chapter 2 (Section 1522(a)(8)).
- "Subject to the limitations and requirements of this chapter, a local educational agency shall have complete discretion in determining how funds under this subpart shall be divided among the areas of targeted assistance of this subpart" (Section 1533(c)).

These provisions effectively prevent ED from requiring or encouraging the use of Chapter 2 funds to support tutoring and mentoring programs. They would not prevent ED from making information available to SEAs and school districts about effective programs of this type, however.

A second (and lesser) problem in using Chapter 2 to support tutoring and mentoring activities, according to program staff, is the inertia that has characterized local program activities. SEAs and school districts have tended since 1981 to use Chapter 2 funds to support activities that they conducted under the forty antecedent programs consolidated into Chapter 2 that year. The program's shift to an improvement focus in 1988 was an attempt to dislodge the status quo, we were told, although there are still no real "teeth" in the law to make that happen.

Given Chapter 2 insistence on local discretion, it does not seem realistic to expect that the law could be amended to encourage any particular type of improvement activity, including tutoring and mentoring. However, it would be useful for current tutoring and mentoring projects to know that Chapter 2 funds are a potential source of local support. With this information, they might be able to press locally for Chapter 2 support.

Fund for the Improvement of Postsecondary Education (FIPSE)

In 1986, Congress authorized a new category of FIPSE funding intended to assist IHE projects in which students provide community service in exchange for educational services or financial assistance. According to FIPSE staff, Campus Compact and the Education Commission of the States were instrumental in obtaining congressional approval for this amendment. FIPSE is currently funding sixty-six community service projects under this authorization. Although program staff said they did not know how many of the sixty-six projects include tutoring and mentoring services to disadvantaged students, they report that more projects provide tutoring and mentoring services than any other single type of service. They also stated that virtually all of the sixty-six projects target their service activities to disadvantaged persons.

The FIPSE grants, which average $45,000 a year over a one- or two-year period, principally cover administrative costs, including salaries, recruitment, placement, training, and in some instances transportation. Participating IHEs are expected to use other funding sources to support student stipends.

The primary advantage of FIPSE as a source of federal assistance for tutoring and mentoring services is that the program provides support directly to the project level within the postsecondary institution. Moreover, the

application process (1) requires IHEs to demonstrate that their proposed project has already received strong support from the community organization they will serve and hence (2) helps ensure that federal money is used to assist projects with the greatest likelihood of achieving their objectives.

FIPSE's most serious drawback as a source of support for tutoring and mentoring programs is simply its limited budget for these activities ($1.4 million in Fiscal Year 1989).

College Work Study Assistance

The Education Amendments of 1980 added Community Service-Learning jobs to the College Work Study program. This provision was created as an incentive for IHEs to establish community service positions, which may include tutoring or mentoring activities. Under the Higher Education Amendments of 1986, IHEs may use up to 10 percent of their College Work Study allocation to subsidize student jobs serving low-income persons at a federal-share rate of 90 percent, which is higher than the allowable share for the regular College Work Study program. In addition, students can be employed in Community Service-Learning jobs under regular College Work Study.

Community service jobs are also encouraged through a separate College Work Study authorization for Job Location and Development activities. Under this authority, IHEs may use an additional 10 percent of their College Work Study allocation (up to $20,000) for locating and developing community service jobs for eligible students.

An institution may obtain additional funds for use in initiating, improving, and expanding programs of Community Service-Learning through the federal reallotment of unused College Work Study funds. Up to 25 percent of

such funds must be distributed to IHEs that request the funds for the purpose of developing Community Service-Learning programs.

ED program personnel report that in 1987-88 a total of forty-four IHEs in twenty-three states employed students in Community Service-Learning jobs. Although ED does not collect data on the characteristics of institutions involved in Community Service-Learning, program staff said that participation is spread evenly across different types of IHEs (e.g. two-year and four-year, public and private) and that some proprietary schools participate in the program. ED staff said that they had no data on the types of community service jobs that students hold.

This program's primary strength in a national strategy concerned with tutoring and mentoring and other forms of community service is that it is an option for linking student financial assistance to community service. The program makes such service a realistic alternative to traditional paid employment for students who must earn money while in college.

Framework for a Federal Strategy to Promote and Encourage Tutoring and Mentoring Programs

Our knowledge of current tutoring and mentoring activities and of the federal authorities that might promote and encourage such activities suggests four principles that could guide development of a federal support strategy. These principles are discussed below.

1. Any targeted federal assistance will be most effective if it builds on current activities supporting tutoring and mentoring programs.

Research to date shows that local initiative (with some encouragement and assistance from private, nonprofit organizations) has led to the establishment of some 1,700 tutoring and mentoring projects across the country, with many of

these established in the last several years. This level of activity suggests that there is considerable local interest and enthusiasm for tutoring and mentoring services and that perhaps the best way for the federal government to promote and encourage these services is to supplement current activities, without creating new programmatic structures at the federal level.

2. New federal financial support may be most useful in assisting project development and implementation at the college level, rather than in school systems.

Our research indicates that the greatest financial needs in connection with tutoring and mentoring activities are experienced at the college level. IHEs report needs for funds to cover administrative costs (especially training, monitoring, and liaison with school systems), stipends for tutors and mentors, and transportation. Available data indicate that IHE program budgets are low (median budgets of $30,000 for tutoring projects and $4,000 for mentoring projects), so that relatively small infusions of federal funds may generate significant levels of tutoring and mentoring services.

Our research (and that of others) indicates that school systems also experience personnel- and materials-related needs that translate into dollars and cents. These include needs for (1) staff time to participate in training and monitoring services and (2) instructional materials appropriate for use in tutorial instruction. These program needs are less critical than those of IHEs in initiating tutoring and mentoring programs, but they are of almost equal importance in ensuring program quality. For this reason, they should be considered an important second priority in any federal support for tutoring and mentoring programs.

3. In order for school systems to become more active proponents of tutoring and mentoring arrangements with IHEs, they need information and technical assistance that is not currently available to them.

Although school systems' needs in this area have a monetary dimension, they are not primarily financial in nature. School systems are likely to need information on how they can integrate tutoring and mentoring into their instructional programs and, to a lesser extent, into their spending plans. They may need information and examples of methods for:

- Selecting students to receive tutoring and mentoring services;
- Scheduling services;
- Training teachers to train and supervise tutors and mentors;
- Monitoring tutoring and mentoring activities; and
- Using federal funds under Chapter 1 and Chapter 2 to support tutoring and mentoring services.

These needs could be met through technical assistance in the form of printed information (such as journal articles and manuals), workshops, and conference presentations. The program-improvement capacity of the Chapter 1 Technical Assistance Centers could provide an appropriate delivery system for this assistance.

4. Existing organizations can be enlisted to assist higher education institutions in initiating, expanding, and improving tutoring and mentoring projects.

Several national and statewide organizations currently assist colleges and universities in developing and implementing community service activities, including tutoring and mentoring. Because their paid staffs consist mainly of recent college graduates who have successfully administered community service activities on their own campuses, the organizations report that they provide significant amounts of service on fairly small budgets. These organizations

could also be vehicles (through their conferences, technical assistance networks, and publications) for providing additional information to IHEs about service techniques, likely benefits, and funding sources.

Small infusions of supplementary funds to these organizations could translate directly into services for interested IHEs (and possibly also school systems), with little need to create new organizational infrastructures. A few small grants under existing ED discretionary authorities could result in significant expansion of the assistance activities conducted by these organizations.

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